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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,656	06/01/2001	James H. Kaufman	ARC920010049US1	8635
26381	7590	06/16/2005	EXAMINER	
LACASSE & ASSOCIATES, LLC 1725 DUKE STREET SUITE 650 ALEXANDRIA, VA 22314			HECK, MICHAEL C	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/870,656

Applicant(s)

KAUFMAN ET AL.

Examiner

Michael C. Heck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/1/01</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Requirement for Information</u> .      |

### **DETAILED ACTION**

1. The following is a First Office Action in response to the application filed 01 June 2001. Claims 1-23 are pending in this application and have been examined on the merits as discussed below.

#### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 818. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

3. The disclosure is objected to because of the following informalities:

- On page 17, line 5, delete "then steps starting from step 802", and insert -- then steps starting from step **803** --.

The above citation is a mere guide. Applicant is requested to review the specification thoroughly to eliminate additional errors. Appropriate correction is required. The Examiner notes that the cover sheet to the application includes only one inventor where two inventors are indicated in the Declaration for Patent Application.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claims 14-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For the process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case,

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**claims 14-20** only recite an abstract idea. As to **claim 14**, the recited steps of a. identifying location coordinates associated with one or more participants, each of said participants associated with a rating; b. detecting one or more location clusters from said identified location coordinates, based on proximity of said participants; creating a rated cluster from each of said location clusters, based on said ratings associated with participants within each of said location clusters; d. calculating a center of mass associated with each of said rated clusters; e. identifying available resources and retrieving resource location data from one or more databases; f. optimizing at least one resource based on said identified resource and said calculated center of mass, and g. dynamically scheduling said optimized at least one resource does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. The method only constitutes an idea for optimizing resources and dynamically scheduling said resource, therefore, is deemed to be directed to non-statutory subject matter.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implications of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps are directed to anything in the technological arts as explained above. Looking at the claim as a whole, nothing in the body of the claim recites any

structure or functionality to suggest that a computer performs the recited steps. Therefore, the preamble is taken to merely recite a field of use.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention produces optimized resources that are dynamically scheduled (i.e., repeatable, useful and tangible).

Looking at the claims as a whole, nothing in the body of the claims recite any structure or functionality to suggest that a computer performs a task. While claim 20 recites notification is done via an email message, this amounts to only communicating the results of the invention where nothing is done (i.e., computing) to breathe life into the invention.

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, the same rejection as stated above for claim 14 applies to **claims 15-20**.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-2, 4, 6-15 and 18-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingham et al. (U.S. Patent 6,324,517) in view of Backhaus

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(Backhaus, An Engineer's View of Economics: Wilhelm Launhardt's Contributions, Journal of Economic Studies, Vol. 72, Number 4/5, 2000, starting page 424 [DIALOG: file 15]). Bingham et al. disclose dynamic resource scheduling to optimize location meeting participants comprising:

- **[Claim 14]** a. identifying location coordinates associated with one or more participants, each of said participants associated with a rating (col. 9, lines 32-45, Bingham et al. teach a list of attendees and their corresponding originating locations and quantity of attendees per originating locations. The Examiner interprets the quantity of attendees from a given location is a form of rating.);
- b. detecting one or more location clusters from said identified location coordinates, based on proximity of said participants (col. 9, lines 32-45, Bingham et al. teach a list of attendees and their corresponding originating locations and quantity of attendees per originating locations. The Examiner interprets the quantity of attendees from one location to be a cluster.);
- c. creating a rated cluster from each of said location clusters, based on said ratings associated with participants within each of said location clusters (col. 9, lines 32-45, Bingham et al. teach a list of attendees and their corresponding originating locations and quantity of attendees per originating locations. The Examiner interprets the quantity of attendees from a given location is a form of rating.);
- e. identifying available resources and retrieving resource location data from one or more databases (col. 9, lines 52-65, Bingham et al. teach a meeting facility list is returned by the application server. The Examiner interprets the meeting facilities to be resources and the list is on a database.);
- f. optimizing at least one resource based on said identified resource and said calculated center of mass (col. 10, lines 6-40, Bingham et al. teach individual costs are optimized.); and
- g. dynamically scheduling said optimized at least one resource (col. 10, lines 6-40, Bingham et al. teach planners are able to find the lowest cost meeting. The Examiner interprets the planners dynamically schedule the optimized meeting.).

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Bingham et al. fail to teach calculating a center of mass associated with each of said rated clusters. Backhaus teaches that Launhardt made an original application for the "node theorem" in order to determine the most efficient location of a blast furnace. The blast furnace could be located at either point A, B, or C or it could be located within the triangle ABC. The optimal location of the blast furnace is P. Mechanically, this solution can be demonstrated by attaching weights proportional to the weight to be transported to the points A, B, C (Page 23). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use Launhardt's "node theorem" with the teachings of Bingham et al. since Bingham et al. teach costs are optimized (col. 10, lines 6-40). Minimizing cost of an operation is a typical goal of Managers. Both Bingham et al. and Backhaus teach optimizing cost in a business environment, therefore there is motivation to combine. One of ordinary skill in the art would know of Launhardt's (1882) work to optimize location to minimize cost, plus there is reasonable expectation of success and the combined art teaches all the claimed limitations.

- **[Claim 15]** filtering said location clusters to modify said ratings (Bingham et al.: col. 9, lines 52-65, Bingham et al. teach when additional amenities are applied, the application server filters the list of hotels.).
- **[Claim 18]** notifying said one or more participants regarding said optimized at least one resource (Bingham et al.: col. 2, line 59 to col3, line 2, Bingham et al. teach transmitting a list of facilities to the user.).
- **[Claim 19]** said resources are any of the following: meeting location, airfare, flight availability, or airline (Bingham et al.: col. 9, lines 52-65, Bingham et al. teach a meeting facility list is returned by the application server. The Examiner interprets the meeting facilities to be resources.).
- **[Claim 20]** said notification is done via an email message (Bingham et al.: col. 4, lines 13-29, Bingham et al. teach the communication function provided by the network includes e-mail.).



**Claims 1-2, 4, 6-13 and 21-23** substantially recite the same limitations as that of claims 14-15 and 18-20 with the distinction of the recited method being a system and an article of manufacture comprising a computer usable medium. Hence the same rejection for claims 14-15 and 18-20 as applied above applies to claims 1-2, 4, 6-13 and 21-23.

**Claims 3, 5 and 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingham et al. (U.S. Patent 6,324,517) in view of Backhaus (Backhaus, An Engineer's View of Economics: Wilhelm Launhardt's Contributions, Journal of Economic Studies, Vol. 72, Number 4/5, 2000, starting page 424 [DIALOG: file 15]) as applied to claim 1 and 14. The Examiner takes Official notice that the equations of claims 3, 5 and 16-17 are well known in the art. The equations perform an averaging and a weighted averaging function of multiple vector xyz coordinates. The application of averaging and weighted averaging techniques is common in the art. For example, industry uses averages in Statistical Process Control, costing, cycle time, etc. Weighting is used to give additional weight to an average such as in costing where the Bill of material is adjusted by quantity. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use averaging techniques to determine the center of group of locations.

***Conclusion***

8. This Office action has an attached requirement for information under 37 CFR 1.105. A complete reply to this Office action must include a complete reply to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Karmarkar (U.S. Patent 4,744,028) discloses a method and apparatus for efficient resource allocation.
- Kolbus (Kolbus, Building a Collaborative Advantage, Work Study, vol. 41, No. 1, Jan/Feb 1992, start page 10 [PROQUEST]) discloses time and location optimization and group meetings that are scheduled by polling individual calendars.
- Brown et al. (U.S. Patent 6,873,851) disclose a method, system, and program for providing user location for a personal information management system from transmitting devices.
- Chithambaram et al. (U.S. patent 6,865,538) disclose a meeting location determination using spatio-semantic modeling.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael C. Heck whose telephone number is (571) 272-6730. The Examiner can normally be reached Monday thru Friday between the hours of 8:30am - 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (571) 273-6729.

Any response to this action should be mailed to:

**Director of the United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, Virginia 22313-1450**

Or faxed to:

**(703) 872-9306**

[Official communications; including After Final communications labeled "**Box AF**"]

**(571) 273-6730**

[Informal/Draft communication, labeled "**PROPOSED**" or "**DRAFT**"]

*mch*  
mch

03 June 2005

**Requirement for Information under 37 CFR 1.105**

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

The applicant claims equations (i.e., average  $x$ ,  $y$ , and  $z$  coordinates and weighted average  $x$ ,  $y$ , and  $z$  coordinates) in claims 3, 5, 16 and 17. The Examiner respectfully requests to know the source of the equations or any information pertinent to the development of the equations.

In response to this requirement, please provide the title, citation and copy of each publication that any of the applicants relied upon to develop the disclosed subject matter that describes the applicant's invention, particularly as to developing said equations. For each publication, please provide a concise explanation of the reliance placed on that publication in the development of the disclosed subject matter.

In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR 1.105 that are included in the applicant's first complete communication responding to this requirement. Any

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supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97.


The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

*mch*

mch

03 June 2005

  
**TARIQ R. HAFIZ**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**